

What is claimed is:

1. (Previously Presented) A compound, comprising:
a nanocomposite selected from the group consisting of
(a) thermoplastic matrix polymer, nanoclay, and compatibilizing dispersion
5 agent having a weight ratio of nanoclay to compatibilizing dispersion agent of less
than 2.2:1 and greater than 1:1.9, and
(b) thermoplastic matrix polymer, nanoclay, and compatibilizing dispersion
agent having a weight ratio of nanoclay to compatibilizing dispersion agent of greater
than 3.1:1 and less than 10:1.
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2. (Previously Presented) The compound of Claim 1, wherein the
nanocomposite further comprises a polyolefin elastomer.
3. (Currently Amended) The compound of Claim 1 ~~or Claim 2~~, wherein the
15 nanocomposite further comprising ingredients selected from the group consisting of
colorants, nucleators, blowing agents, activators which lower the activation
temperature of the blowing agent, surfactants, plasticizers, stabilizers, flame
retardants, UV absorbers, fillers, fragrances, mold release aids, processing aids,
biocides, antistatic additives, anti-microbial agents, lubricants, and combinations of
20 them.
4. (Currently Amended) The compound of Claim 1 ~~or Claim 2 or Claim 3~~,
wherein the nanoclay comprises at least 9 weight percent of the nanocomposite.
- 25 5. (Currently Amended) The compound of ~~any of Claims 1-4~~ Claim 1,
wherein the compound further comprises a thermoplastic polyolefin mixed with the
nanocomposite.
- 30 6. (Currently Amended) ~~An article made from the~~ The compound of any of
~~Claims 1-5~~ Claim 1 in the form of an article.

7. (Currently Amended) ~~A method of using the compound of Claim 5, The compound of Claim 5, wherein comprising the step of mixing the nanocomposite of any of Claims 1-4~~ is mixed with a thermoplastic polyolefin at a point of molding or extruding a final thermoplastic article.

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8. (Currently Amended) The ~~method~~ compound of Claim 7, wherein the thermoplastic polyolefin and the nanocomposite are mixed ~~mixing step occurs~~ at a ratio of about 4:1 of thermoplastic polyolefin to nanocomposite.

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9. (Currently Amended) ~~A method of using the~~ The compound of Claim 4, ~~comprising the step of pelletizing wherein~~ the nanocomposite is in the form of pellets for further processing.

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10. (Currently Amended) The ~~method of Claim 9~~ compound of Claim 4, wherein the nanocomposite is in the form of a molded or extruded ~~further processing is molding or extruding the nanocomposite into a shape of an~~ article.

11. (Currently Amended) A method of making a compound of ~~any of Claims 2-4~~ Claim 2, comprising the steps of

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(a) adding the thermoplastic matrix polymer, nanoclay, and nanoclay dispersion agent to an extruder; and

(b) adding the polyolefin elastomer downstream from where the thermoplastic matrix polymer, nanoclay, and nanoclay dispersion agent were added.

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12. (Previously Presented) The method of Claim 11, wherein step (a) also includes adding ingredients selected from the group consisting of colorants, nucleators, blowing agents, activators which lower the activation temperature of the blowing agent, surfactants, plasticizers, stabilizers, flame retardants, UV absorbers, fillers, fragrances, mold release aids, processing aids, biocides, antistatic additives, anti-microbial agents, lubricants, and combinations of them.

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13. (New) The compound of Claim 2, wherein the nanocomposite further comprising ingredients selected from the group consisting of colorants, nucleators, blowing agents, activators which lower the activation temperature of the blowing agent, surfactants, plasticizers, stabilizers, flame retardants, UV absorbers, fillers, fragrances, mold release aids, processing aids, biocides, antistatic additives, anti-microbial agents, lubricants, and combinations of them.

14. (New) The compound of Claim 2, wherein the nanoclay comprises at least 9 weight percent of the nanocomposite.

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15. (New) The compound of Claim 2, wherein the compound further comprises a thermoplastic polyolefin mixed with the nanocomposite.

16. (New) The compound of Claim 3, wherein the nanoclay comprises at least 9 weight percent of the nanocomposite.

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17. (New) The compound of Claim 3, wherein the compound further comprises a thermoplastic polyolefin mixed with the nanocomposite.

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18. (New) The compound of Claim 2 in the form of an article.

19. (New) The compound of Claim 3 in the form of an article.

20. (New) The compound of Claim 4 in the form of an article.

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